

Commonwealth of Massachusetts

Executive Office of Environmental Affairs ■ MEPA Office

ENF

Environmental Notification Form

For Office Use Only
 Executive Office of Environmental Affairs
 EOEA No.: 14048
 MEPA Analyst: Deirdre Buckley
 Phone: 617-626-1044

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: North Pasture New Water Supply and Water Storage Facility, Nantucket, MA		
Street: 00 North Pasture, located between Polpis Road and a proprietor's way off of Milestone Road (opposite Tawpoot Road)		
Municipality: Nantucket, MA	Watershed: Nantucket	
Universal Transverse Mercator Coordinates:	Latitude: 4,569,625.0 meters North Longitude: 410,259.6 meters East	
Estimated commencement date: Sept., 2007	Estimated completion date: July, 2009	
Approximate cost: \$5,840,000.00	Status of project design: 80 %complete	
Proponent: Wannacomet Water Company		
Street: One Milestone Road		
Municipality: Nantucket	State: MA	Zip Code: 02554
Name of Contact Person From Whom Copies of this ENF May Be Obtained: John O'Brien		
Firm/Agency: Haley and Ward, Inc.	Street: 25 Fox Road	
Municipality: Waltham	State: MA	Zip Code: 02451
Phone: (781) 890-3980	Fax: (781) 890-1491	E-mail: jobrien@haleyward.com

- Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
 Yes No
- Has this project been filed with MEPA before?
 Yes (EOEA No. _____) No
- Has any project on this site been filed with MEPA before?
 Yes (EOEA No. _____) No
- Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
- a Single EIR? (see 301 CMR 11.06(8)) Yes No
 - a Special Review Procedure? (see 301CMR 11.09) Yes No
 - a Waiver of mandatory EIR? (see 301 CMR 11.11) Yes No
 - a Phase I Waiver? (see 301 CMR 11.11) Yes No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):

Are you requesting coordinated review with any other federal, state, regional, or local agency?
 Yes (Specify _____) No

List Local or Federal Permits and Approvals:

DEP: BRP WS 17, 18,19, & 20, Request for Site Exam through Approval to Construct New Source
DEP: BRP WS 34 System Modifications
NHESP : MESA Review for projects within Priority Habitat for Rare Species
MHC: Project Notification Form; Determination of no adverse impact to archeological resources
MHC: Section 106 Review
Nantucket Historic District Commission
Nantucket Zoning Board of Appeals
Tribal Historic Preservation Officer: Notification and request for assistance in identifying historical resources.
Commonwealth of Massachusetts Aeronautic Commission: Request for Air Space Review
FAA: Notice of Proposed Construction and Alteration.

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- | | | |
|---|--|---|
| <input type="checkbox"/> Land | <input checked="" type="checkbox"/> Rare Species | <input type="checkbox"/> Wetlands, Waterways, & Tidelands |
| <input checked="" type="checkbox"/> Water | <input type="checkbox"/> Wastewater | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Air | <input type="checkbox"/> Solid & Hazardous Waste |
| <input type="checkbox"/> ACEC | <input type="checkbox"/> Regulations | <input checked="" type="checkbox"/> Historical & Archaeological Resources |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
LAND				<input type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input type="checkbox"/> Chapter 91 License <input type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input type="checkbox"/> Water Management Act Permit <input checked="" type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/Extension Permit <input type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i>
Total site acreage	32.78			
New acres of land altered		2.41		
Acres of impervious area	-	0.05	0.05	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		0		
Acres of new non-water dependent use of tidelands or waterways		0		
STRUCTURES				
Gross square footage	-	2,300	2,300	
Number of housing units	-	-	-	
Maximum height (in feet)	-	113.4	113.4	
TRANSPORTATION				
Vehicle trips per day	-	2	2	
Parking spaces	-	1	1	
WATER/WASTEWATER				
Gallons/day (GPD) of water use	0	0	0	
GPD water withdrawal: (Avg.)	0	0.48 mgd	0.48 mgd	
(Peak)	0	1.44 mgd	1.44 mgd	
GPD wastewater generation/treatment	0	0	0	
Length of water/sewer mains (in miles)	0	0.52	0.52	

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

Yes (Specify _____) No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

Yes (Specify _____) No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

Yes (Specify: PH 1232, as indicated in the Massachusetts Natural Heritage Atlas, 12th ed.) No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes (Specify: Nantucket Island National Historic Site) No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify: _____) No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

Yes (Specify: _____) No

PROJECT DESCRIPTION: The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (You may attach one additional page, if necessary.)

General:

First and foremost, the proposed new water supply well is necessary to provide the Wannacomet Water Company with additional flexibility (redundancy) in the management of the Town's water resources. The proposed well system would allow for reduced pumping at existing withdrawal points minimizing any potential environmental impacts these existing sources may have on the island's natural habitats, and reduce the potential for saltwater intrusion from over stressing the aquifer in the areas of the existing water wells. This additional flexibility in source management is particularly needed during periods of prolonged peak summer demand. This well would also serve to support the Town's efforts in meeting present and future water supply demands and provide supply system redundancy in the event of problems with, or during routine maintenance of the Town's other existing wells.

Secondly, as the population of the community served is highly seasonal, it is necessary to be in a position where peak short term demands can be met, over and above the ability of the water storage system. The WWC presently has a 2.0 mg water storage standpipe to provide additional volume for fire protection and peak demands. Recently peak demands have been exceeding system pumping capacity and this extra volume demand has been met with stored reserves in the storage standpipe. This situation is indicative of the need for an additional storage facility to ensure adequate volume for fire protection is maintained during peak demand periods. This new tank will also provide redundancy in the event of problems with, or during maintenance of the Town's existing storage facility.

A. Site Description:

The location of the proposed project is on former town land known as 00 North Pasture, located between Polpis Road and a proprietor's way off of Milestone Road. (Map 1). In 2004, the Wannacomet Water Company purchased the 32.78 acre parcel of land from the Town of Nantucket for the sanitary protection of a proposed new municipal groundwater supply, water storage tank and other water system improvements. The property is located in a single-family residentially zoned area of large housing lots and undeveloped land. The nearest wetland is located approximately 1,500 feet to the northeast and the closest shoreline is nearly 4,000 feet to the north.

B. On-site and Off-site Alternatives:

The selection of available land on which to develop a new groundwater source depends upon topography, depth to water table, favorable aquifer characteristics, parcel ownership, parcel size, location relative to existing infrastructure, capacity for sanitary protection, aesthetic impacts and system hydraulics.

The selection of available land on which to build a storage facility is governed by the overall system configuration. The criteria for siting evaluation were based upon parcel ownership, parcel size, ground elevation/topography, location relative to existing infrastructure, environmental impacts, aesthetic impacts and system hydraulics.

Due to the very limited availability of land meeting the criteria for a new groundwater source, some preliminary groundwater investigations were conducted prior to the decision on the 00 North Pasture Parcel. Several water management alternatives were also explored prior to purchase. These alternative management practices included leak detection, conservation and demand-management. New water management infrastructure installed over recent years includes new Master Meters, a new SCADA control system and new service meters system-wide. This new equipment upgrade and the water management practice it affords have brought about an unprecedented reduction in unaccounted for water, as low 1.1%, June 2005. Additional planning is underway to implement an Island-Specific Water Conservation Plan for irrigation systems. Though, even with these system improvements the need for an additional source remains.

Many factors enter into the siting of a new water storage facility, which depends upon the availability and ability to procure a site, the ability to provide room for the construction process, the elevation of the site and its particular location within the drinking water distribution system, the hydraulics of the water system, the geotechnical characteristics of the site, the aesthetic impact created by the structure and other factors dictate the most appropriate location for the construction of a water storage facility, and in this case the North Pasture site met these requirements.

In the case of North Pasture, the WWC had the opportunity to procure the site which served two purposes, the ability to develop a new water supply and in doing so, the water storage facility was designed to house the pump control room within the supporting structure of the tank, thus eliminating the necessity to construct a separate pumping station. In addition the tank configuration and location provides housing for the installation of the Police emergency communications equipment.

C. On-site and Off-site Mitigation Measures:

There are no deleterious environmental impacts anticipated with the siting of a new source on the North Pasture land parcel. Groundwater investigations have indicated that the surface of the water table is a minimum of 50-feet below ground surface and there are no wetlands or surface water on the site. Wetlands and surface water located up-gradient of the North Pasture site will not be negatively affected by a new source withdrawal at this location as they are not likely to be in direct connection with the affected portion of the aquifer.

In the choice of a drinking water storage facility configuration, many choices are available. In the case of the WWC, the choice was a multi-use elevated structure facility where all the water contained therein is within the usable range, and the support structure is utilized for a pump station and an emergency communications station. The structure chosen for the North Pasture site is a composite elevated tank, meaning the support structure (column) is concrete and the water bearing bowl of the structure is welded steel. Understanding that any structure of this size and height will be visible, utilizing this type construction, the intended color scheme of the steel portion of the structure is carefully selected to make it fit with the landscape and blend into the skyline.

Elevated water storage facilities are a necessity in drinking water systems to ensure that the residents served receive ample water for fire fighting demands and adequate supply to insure that the needs of the residents, visitors and businesses of the community are met at all times. The North Pasture site was purchased specifically for the siting of a new supply source and storage tank. Groundwater explorations conducted on the site have indicated that the aquifer has excellent yield potential and distribution system modeling has indicated the site offers high hydraulic performance for the location of a storage facility. The site is located in a sparsely developed area and is not adjacent to historical landmarks, therefore, there should be few aesthetic concerns associated with this site. Community acceptance for the site has been favorable as indicated when the community agreed to its use when the land was purchased in 2004. The site offers low economic and environmental impacts, while delivering the additional source and storage capacity the community requires.